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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,043	05/30/2006	Hauke Malz	290777US0PCT	7091
22850	7590	06/17/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
SERGENT, RADON A				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
06/17/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

**Application No.**

10/581,043

**Applicant(s)**

MALZ ET AL.

**Examiner**

Rabon Sergeant

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/02)
- Paper No(s)/Mail Date 5/30/2006
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

1. The disclosure is objected to because of the following informalities: The heading, "Brief Description of the Drawing", is required immediately before the description of the figure.

Appropriate correction is required.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-4, 7, 8, 11, 12, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Moore et al. ('957).

Patentees disclose the production of thermoplastic polyurethanes, wherein a polyisocyanate is reacted with a polymer polyol. The polymer polyol is produced by

polymerizing ethylenically unsaturated monomers, such as mixtures of styrene and acrylonitrile in a weight ratio range of about 25:75 to about 95:5, and a stabilizer corresponding to applicants' claimed macromer, in a continuous polyol phase, wherein a particularly preferred polyol is a polymer of tetrahydrofuran. Accordingly, the disclosed polymer polyol is considered to meet applicants' claimed polymer polyol. Patentees further disclose that the polymer polyol may be diluted with another polyol having an equivalent weight of about 1,000 to 2,500, and the position is taken that one would have immediately envisioned a polyol having the claimed functionality of component d) from the disclosure within the patent; accordingly, this polyol is considered to meet applicants' component d). Also, patentees disclose the use of chain extenders. See column 2, lines 64+; columns 3 and 4; column 5, lines 7-58; column 8, lines 13-53 and 66+; column 9, lines 1-11 and 44-50. Given that the reactants of the disclosed composition meet those of applicants' components, it is logical to conclude that the disclosed thermoplastic polymer possesses applicants' claimed transparent property.

4. Claims 5, 6, 9, 10, and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore et al. ('957) in view of Edwards et al. ('325).

As aforementioned, Moore et al. disclose the production of thermoplastic polyurethanes, wherein a polyisocyanate is reacted with a polymer polyol. The polymer polyol is produced by polymerizing ethylenically unsaturated monomers, such as mixtures of styrene and acrylonitrile in a weight ratio range of about 25:75 to about 95:5, and a stabilizer corresponding to applicants' claimed macromer, in a continuous polyol phase, wherein a particularly preferred polyol is a polymer of tetrahydrofuran. Accordingly, the disclosed polymer polyol is considered to meet applicants' claimed polymer polyol. Patentees further disclose that the polymer polyol may be

diluted with another polyol having an equivalent weight of about 1,000 to 2,500. Also, patentees disclose the use of chain extenders.

5. Moore et al. fail to disclose that the polymer polyol is used in an amount of 30 to 75% by weight of the polyurethane (claims 5 and 13-15, that the reaction is carried out at an isocyanate index of 1005 to 1025 (claims 6 and 16-19), and that the thermoplastic polyurethane is used to make film, cable sheath, injection molding, or a ski (claims 9 and 10). With respect to the content of polymer polyol, the position is taken that the selection of a specific quantity that falls within the claimed range amounts to the obvious selection of a result effective variable. The skilled artisan would have appreciated that the properties of the polyurethane can be tailored by varying the respective amounts of reactants and thus would have appreciated that amounts of the polyols constitute result effective variables. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). With respect to the claimed isocyanate index, it is noted that the use of index values that correspond to those claimed within thermoplastic polyurethane formulations was known at the time of invention. Edwards et al. et al. disclose at column 3, line 60 the preferred use of an NCO/OH ratio of 1.015:1, which corresponds to an isocyanate index value 1015, within an analogous thermoplastic polyurethane composition. Therefore, the position is taken that it would have been obvious to operate at what appears to be a conventional index value. Lastly, with respect to applicants' claimed utilities, Edwards et al. also disclose that thermoplastic polyurethanes can be used to produce injection moldings and items such as skis and cables. See abstract and column 5, lines 7-57. Therefore, given the similarities between the compositions of the primary and secondary references, the position is taken that it would have been obvious to use the thermoplastic polyurethanes of the primary reference to produce the claimed items.

Art Unit: 1796

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

/Rabon Sergent/  
Primary Examiner, Art Unit 1796